PIONEER®
The future of sound and vision.

Service Manual

ORDER NO.
ARP 1657

SPEAKER SYSTEM
S-W1000

MODEL S-W1000 HAS TWO VERSIONS:

Type	Power requirement	Export destination
KU	AC120V only	U.S.A.
CA	AC120V only	Canada

- **This manual is applicable to the KU and CA types.**

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MA OCT. 1988 Printed in Japan

1. SPECIFICATIONS

Cabinet ············ A floor, bass-reflex type, with a built-in amplifier, having a PVC-sheet finishing with a hairline pattern.
Speaker ···························· 12 inch, anti-magnetic type
Power Amplifier
  Sub-woofer alone ········ 70 W, 5 % (20 Hz～140 Hz)
  Sub-woofer and center ch output
  ···················· 30 W, 5 % (70 Hz)... Sub-woofer
  ··· 25 W, 1 %, 6 Ω (20 Hz～20 kHz) ... Center ch output
Input
  Monaural (pin jack) ··· 3.5 kΩ (1V)...Sub－woofer
  Stereo (push terminal) ··· 6 kΩ (1.5V)...Sub-woofer
  Center ch input ································ 51 kΩ (1V)
Subsonic Filter ·························· 10 Hz (−12dB/oct.)

Turnover Frequency ··························· 60, 90, 140 Hz
Outline Dimension ··· 505(W) x 533(H) x 413(D) (projection excluded)
505(W) x 533(H) x 436(D) (projection included)
Power Voltage ···································· AC 120V 60 Hz
Power Consumption ·· 60 W
Weight ·························· Main unit: 21 kg (43 lb 5 oz)
Total: 24 kg (52 lb 15 oz)
Accessories ···································· Pin cord (3m) x1
Parallel cord (3m) x 2
Operating instructions x 1
Warranty card x 1

2. PACKING

Parts List

Mark	No.	Part No.	Description
	1	THK1085	Packing case
	2	TEC1157	Protector
	3	THC1006	Sheet
	4	TRA1063	Operating instructions
	5	TDE1003	Pin plug cord
	6	TDC1193	Cord

Mark	No.	Part No.	Description
	51		Vinyl bag
	52		Warranty card
	53		Vinyl bag

3. EXPLODED VIEW AND PARTS LIST

EXTERIOR

NOTES:

- *Parts without part number cannot be supplied.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

Parts List

Mark	No.	Part No.	Description
	1	AMR1158	Leg assembly
	2	TAN1038	Front panel
	3	TBA1024	Screw
⚠	4	JTT1005	Transformer
⚠	5	JDG1004	AC power cord
	6	JNS1055	Holder B
	7	JGL1001	Lens
	8	JAC1008	Button
	9	JBM1001	Rivet
	10	JNM1020	Spacer
	11	TRN1001	Caution label A
	12	VRW-386	Caution label
	13	30–03A	Speaker
	14	PMB40P200FMC	Screw
	15	BPZ30P080FZK	Screw
	16	BNC30P120FZK	Screw
	17	BNC50P200FMC	Screw
	18	PMB30P100FMC	Screw
	19	BMZ30P180FMC	Screw
	20	BNC30P300FMC	Screw
	21	AMZ40P120FMC	Screw
	22	REC1210	Knob A
	23	BNC40P160FMC	Screw
	24	JEK1011	Fuse (FU301, 2A)
	25	JBB1001	BUSH A
	26	JBB1002	BUSH B
	27	TXC1028	Saran-laminate assembly A
	28	TXC1029	Salan-laminate assembly B
	29	TNA1176	Fitting
	*100	JWK1012	Mather assembly
	101		Cabinet
	102		Bottom plate
	103		Badge
	104		. . .
	105	JBA1002	Stud
	106		Holder
	107		AMP. unit
	108		Volume unit
	109		Rear unit-1
	110		Rear unit-2
	111		SW. unit
	112		LED unit

* Mother assembly JWK1012 (Key No. 100) is available as a service part

4. SCHEMATIC DIAGRAM (MOTHER ASSEMBLY JWK1012)

REAR UNIT-1

VOLUME UNIT

AMP UNIT

REAR UNIT-2

SWITCH UNIT

LED UNIT

NOTE:

1. RESISTORS:
   Indicated in Ω, 1/8W & 1/4W, ±5% tolerance unless otherwise noted k; kΩ, M; MΩ, (F); ±1%, (G); ±2%, (K); ±10%, (M); ±20% tolerance

2. CAPACITORS:
   Indicated in capacity (μF)/voltage (V) unless otherwise noted p; pF. Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE, CURRENT:
   ; DC voltage (V) at no input signal
   Value in ( ) is DC voltage at rated power.
   mA; DC current at no input signal

4. OTHERS:
   ; Signal route.
   ; Adjusting point.

The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
* marked capacitors and resistors have parts numbers.
The underlined indicates the switch position.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

AMP. Unit

	IC1	STK4152
	Q3	2SA1048
	Q1, Q2, Q5	2SC2240
	Q4	2SD438
⚠	D1, D4, D9, D10	ERA15-02VH
	D3	RD7R5JS
⚠	D8	S4VB20F
	D2, D5–D7	1SS131

Volume Unit

IC101	TA75558S
Q101	2SD1468S
D101, D102	RD15JS

LED Unit

D401	AEL1040

———— Woofer speaker signal

— — — — — Center speaker signal

5. P.C. BORDS CONNECTION DIAGRAM

Switch unit

Rear unit-1

YELLOW

WHITE

BLUE

POWER TRANSFORMER

GRAY

BLACK

GRAY

AC POWER CORD

AC 120W 60Hz

AMP. unit

Volume unit

LED unit

WOOFER

Rear unit-2

6. ELECTRICAL PARTS LIST

NOTES:

- *Parts without part number cannot be supplied.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex. 1 *When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).*

560Ω	56×10^1	561	RD1/4PS[5][6][1]J
47kΩ	47×10^3	473	RD1/4PS[4][7][3]J
0.5Ω	0R5		RN2H[0][R][5]K
1Ω	010		RS1P[0][1][0]K

Ex. 2 *When there are 3 effective digits (such as in high precision metal film resistors).*

5.62kΩ	562×10^1	5621	RN1/4SR[5][6][2][1]F

Miscellaneous parts

P.C. BOARD UNIT

Mark	Symbol & Description	Part No.
	Mother assembly	JWK1012
	AMP. unit	
	Volume unit	
	Rear unit-1	
	Rear unit-2	
	Switch unit	
	LED unit	

OTHERS

Mark	Symbol & Description		Part No.
⚠		Transformer	JTT1005
⚠		AC power cord	JDG1004
⚠	FU301	Fuse (2A/125V)	JEK1011

AMP. Unit

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
	IC1	STK4152
	Q3	2SA1048
	Q1, Q2, Q5	2SC2240
	Q4	2SD438
⚠	D1, D4, D9, D10	ERA15-02VH
	D3	RD7R5JS
⚠	D8	S4VB20F
	D2, D5–D7	1SS131

Coil

Mark	Symbol & Description	Part No.
	L1, L2	ATH-133

RELAY

Mark	Symbol & Description	Part No.
⚠	RL1	JSR1003
⚠	RL2	JSR1004

CAPACITORS

Mark	Symbol & Description		Part No.
	C15, C16	(6,800 µF/42V)	ACH1019
⚠	C17	(0.01µF/AC150V)	ACG-019
⚠	C20	(0.01µF/AC250V)	ACG-502
	C12		CEA010M50L2
	C9		CEA010M50NP
	C13		CEA221M10L2
	C3, C14		CEA101M35L2
	C4–C7		CEA470M25L2
	C8		CEA471M6R3L2
	C1, C2		CEAR47M50L2
	C18, C19		CKCYB471K50
	C10, C11		CQMA473K50

RESISTORS

Mark	Symbol & Description		Part No.
⚠	R16	(0.22Ω)	ACN-137
⚠	R33, R34		RS1HF821JL
⚠	R24–R27		RS1/2MF100JL
⚠	R8, R13, R31		RD1/2HS□□□JL
⚠	R2, R10, R32		RFA1/4L□□□J
	Other resistors		RD1/4PS□□□JL

Volume Unit

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
	IC101	TA75558S
	Q101	2SD1468S
	D101, D102	RD15JS

SWITCH

Mark	Symbol & Description	Part No.
	S102	JSC1001
	S101	JSC1002

CAPACITORS

Mark	Symbol & Description	Part No.
	C110	CEA010M50L2
	C108	CEA010M50NP
	C104, C105	CEA101M16LL
	C111	CEA470M25L2
	C112	CEA2R2M50L2
	C101, C102	CEA3R3M50L2
	C109	CKCYB471K50
	C103	CQFA104J50L
	C107	CQFA473J50L
	C106	CQMA204K50

RESISTORS

Mark	Symbol & Description	Part No.
	VR101 (2kΩ)	JCS1004
	VR102 (50kΩ)	JCS1005
	R101 - R118	RD1/4PS□□□JL

Rear Unit-1

SWITCH

Mark	Symbol & Description	Part No.
	S201 Slide switch	JSH1003

RESISTORS

Mark	Symbol & Description	Part No.
⚠	R203, R204 (2W)	RS2HF681JL
	R201, R202	RD1/4PS472JL

OTHERS

Mark	Symbol & Description	Part. No.
	Terminal (SP)	SKE-015
	One lock terminal	JKE1004

Switch Unit

SWITCH

Mark	Symbol & Description	Part No.
⚠	S301 Power switch	JSG1009

CAPACITOR

Mark	Symbol & Description	Part No.
⚠	C301 (0.01μF/AC250V)	ACG-502

LED Unit

SEMICONDUCTOR

Mark	Symbol & Description	Part No.
	D401	AEL1040

Rear Unit-2

OTHERS

Mark	Symbol & Description	Part No.
	2P Jack	JKN1010

7. SAFETY INFORMATION

(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.

Device under test
Leakage current tester
Reading should not be above 0.5mA
Test all exposed metal surfaces
2-wire cord
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.